

Classification of plants.—A third edition of Professor BESSEY's *Outlines of plant phyla* has appeared. The previous editions were noted in this journal (51:317. 1911; 53:275. 1912) and the general features of the classification given. In the new edition the 14 phyla remain the same, but the families have increased from 648 to 652. The relation of the conventional four great groups to this scheme may be indicated by the statement that the thallophytes are broken up into 7 phyla, the bryophytes remain as a single phylum, the pteridophytes become 3 phyla, and the spermatophytes 3.—J. M. C.

Perithecium of Polystigma.—BLACKMAN and WELSFORD³⁷ have investigated the development of the perithecium of *Polystigma*, and have discovered that while well marked ascogonia occur, they disorganize without producing ascogenous hyphae, and that the spermatia are also functionless. It differs from most of the Ascomycetes in which the normal sexual process is absent by the fact that both sex organs are distinctly produced, but that both are abortive.—J. M. C.

Wound reactions in fern petioles.—HOLDEN³⁸ induced wound reactions in the petioles of 37 species of ferns, the wounds being thin superficial shavings made with a scalpel in three regions: the curled apical portion, the region of pinna insertion, and the region below pinna insertion. Various reactions were obtained, which differ too much in details to be summarized in a review, but all of which are interesting contributions to the subject of wound reactions.—J. M. C.

Mycorrhiza of Asarum.—SCHWARTZ³⁹ has studied the mycorrhiza of *Asarum europaeum*, finding it limited to the cortical region abutting on the steles of young roots. Thick-walled swellings were found on some of the hyphae, representing a resting stage.—J. M. C.

Lateral archegonia in Pinus.—SAXTON⁴⁰ has made the very interesting discovery of a female gametophyte of *Pinus maritima* which bears two lateral groups of two archegonia each, and no terminal (micropylar) archegonia at all.—J. M. C.

³⁷ BLACKMAN, V. H., and WELSFORD, E. J., The development of the perithecium of *Polystigma rubrum* D.C. *Ann. Botany* 26:761-767. pls. 70, 71. 1912.

³⁸ HOLDEN, H. S., Some wound reactions in filicinean petioles. *Ann. Botany* 26:777-793. pls. 73, 74. fig. 1. 1912.

³⁹ SCHWARTZ, E. J., Observations on *Asarum europaeum* and its mycorrhiza. *Ann. Botany* 26:769-776. pl. 72. 1912.

⁴⁰ SAXTON, W. T., Note on an abnormal prothallus of *Pinus maritima* L. *Ann. Botany* 26:943-945. fig. 1. 1912.